Biotechnology and Bioengineering

Volume 71, 2000/2001

Winter 2000

FOREWORD

1 Polymer Supports for Streamlined Organic Synthesis
J.A. Porco, Jr. and J.W. Labadie

ARTICLES

3 Resin Effects In Solid Phase S_NAr and S_N2 Macrocyclizations
Y. Feng and K. Burgess

9 Streamlined Synthesis of Substituted 2-Aminothiazoles Using Tandem Precipitative and Polymer-Assisted Reactions
Y.K. Yun, S.S.W. Leung, and J.A. Porco, Jr.

19 Automated Solid-Phase Synthesis of Linear Nitrogen-Linked Compounds
P.W. Davis and E.E. Swayze

28 Synthesis of Highly Substituted 5-(Trifluoromethyl)ketoimidazoles Using a Mixed-Solid/Solution Phase Motif
B.C. Hamper, K.D. Jerome, G. Yalamanchili, D.M. Walker, R.C. Chott, and D.A. Mischke

38 Polymer-Supported Silyl Cyanide and Silyl Azide: Useful Reagents for Solid-Phase Applications
A. Missio, C. Marchioro, T. Rossi, M. Panunzio, S. Selva, and P. Seneci

44 Solid-Phase Combinatorial Synthesis Using MicroKan Reactors, Rf Tagging, and Directed Sorting
X.-Y. Xiao, R. Li, H. Zhuang, B. Ewing, K. Karunaratne, J. Lillig, R. Brown, and K.C. Nicolaou

51 Polymer-Assisted Solution-Phase (PASP) Library Synthesis of α-Ketoamides
M.S. South, T.A. Dice, and J.J. Parlow

58 Synthesis and Biological Evaluation of a Targeted Library of Protein Phosphatase Inhibitors
P. Wipf, D.C. Aslan, D.K. Luci, E.C. Southwick, and J.S. Lazo

71 The Preparation of Amino-Substituted Biaryl Libraries: The Application of Solid-Supported Reagents to Streamline Solution-Phase Synthesis
M.G. Organ and C.E. Dixon

78 Resin Activation Capture Technology: Libraries from Stabilized Acyl-Pyridinium on Solid Support
B. Munoz, C. Chen, and I.A. McDonald

85 Erratum

This Journal is Online
WILEY InterScience®
www.interscience.wiley.com

Number 2, 2000/2001

SOLID PHASE SYNTHESIS

87 Solid-Phase Synthesis of 2,4-Diaminoquinazolines
Z. Wu, J. Kim, R.M. Soll, and D.S. Dhanoa
Published online 12 June 2000

91 Novel α-Hydroxyethyl-Polystyrene, α-Chloroethyl-Polystyrene and α-Amino-oxyethyl-Polystyrene Linkers on the Multipin™ Solid Support for Solid-Phase Organic Synthesis
C.T. Bui, N.J. Maeji, and A.M. Bray
Published online 12 June 2000

RESEARCH ARTICLES

94 Symmetric Building Blocks and Combinatorial Functional Group Transformation as Versatile Strategies in Combinatorial Chemistry
J.S. Früchtel, K. Pflugseder, and H. Gstach
Published online 12 June 2000

104 A Selenide Linker for "Traceless" Solid-Phase Organic Synthesis
Z. Li, B.A. Kulkarni, and A. Ganesan
Published online 22 March 2001

Special Section
Analytical Methods for the Combinatorial Sciences

INTRODUCTION

109 Analytical Methods for the Combinatorial Sciences
Y. de Miguel
Published online 22 March 2001

110 Solid-Phase Reaction Monitoring—Chemical Derivatization and Off-Bead Analysis
C. Kay, O.E. Lorthioir, N.J. Parr, M. Congreve, S.C. McKeown, J.J. Scicinski, and S.V. Ley
Published online 22 March 2001

119 Infrared Spectroscopy in Solid-Phase Synthesis
Y.R. de Miguel and A.S. Shearer
Published online 22 March 2001

130 High Resolution MAS-NMR in Combinatorial Chemistry
M.J. Shapiro and J.S. Gounarides
Published online 22 March 2001

149 FTICR-Mass Spectrometry for High-Resolution Analysis in Combinatorial Chemistry
D.G. Schmid, P. Grosche, H. Bandel, and G. Jung
Published online 22 March 2001

162 High-Throughput Determination of Identity, Purity, and Quantity of Combinatorial Library Members Using LC/MS/UV/ELSD
L. Fang, J. Pan, and B. Yan
Published online 22 March 2001

Number 3, 2000/2001

173 Influence of Preculture on the Prefreeze and Postthaw Characteristics of Hepatocytes
A. Hubel, M. Conroy, and T.B. Darr
Published online 29 March 2001

184 Overexpression of *bcl-2* Inhibits Sodium Butyrate-Induced Apoptosis in Chinese Hamster Ovary Cells Resulting in Enhanced Humanized Antibody Production
N.S. Kim and G.M. Lee
Published online 29 March 2001

194 Tracking Lysozyme Unfolding During Salt-Induced Precipitation with Hydrogen Exchange and Mass Spectrometry
S.A. Tobler, N.E. Sherman, and E.J. Fernandez
Published online 29 March 2001

208 Use of Lipophilic Anions for Estimation of Biomass and Cell Viability
R. Daugelavičius, E. Bakienė, J. Beržinskienė and D.H. Bamford
Published online 29 March 2001

217 Detection of Toxic Chemicals with High Sensitivity by Measuring the Quantity of Induced P450 mRNAs Based on Surface Plasmon Resonance
M. Oyama, T. Ikeda, T.-k. Lim, K. Ikebukuro, Y. Masuda, and I. Karube
Published online 29 March 2001

223 Use of the Avidin (Imino)biotin System as a General Approach to Affinity Precipitation
F. Garret-Flaudy and R. Freitag
Published online 29 March 2001

235 Novel Enzymatic Approach to the Synthesis of Flavonoid Glycosides and Their Esters
C. Gao, P. Mayon, D.A. MacManus, and E.N. Vulfson
Published online 29 March 2001

Number 4, 2000/2001

245 Mechanism of Charged Pollutants Removal in an Ion Exchange Membrane Bioreactor: Drinking Water Dentrification
S. Velizarov, C.M. Rodrigues, M.A. Reis, and J.G. Crespo
Published online 30 March 2001

255 Modeling, Simulation, and Optimization of Bacterial Leaching Reactors
F.K. Crundwell
Published online 30 March 2001

266 Efficient Selection of High-Producing Subclones During Gene Amplification of Recombinant Chinese Hamster Ovary Cells by Flow Cytometry and Cell Sorting
N. Borth, M. Zeyda, and H. Katinger
Published online 30 March 2001

274 Modeling the Kinetics of Vinyl Chloride Cometabolism by an Ethane-Grown *Pseudomonas* sp.
M.F. Verce and D.L. Freedman
Published online 30 March 2001

286 Combining Pathway Analysis with Flux Balance Analysis for the Comprehensive Study of Metabolic Systems
C.H. Schilling, J.S. Edwards, D. Letscher, and B.Ø. Palsson
Published online 30 March 2001

307 Controlling Hyperhydration of Carnations (*Dianthus caryophyllus* L.) Grown in a Mist Reactor
M.J. Correll, Y. Wu and P.J. Weathers
Published online 30 March 2001

317 Indexes to Volume 71